Montana Fish, Wildlife & Parks

March 9, 2001

1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Nongame Coordinator
Native Species Coordinator, Fisheries
Missoula Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Missoula County Conservation District, 5115 Highway 93 South, Missoula, MT 59801
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Dan Rogers, City of Missoula, Parks and Rec. Department, 100 Hickory, Missoula, MT 59801
Land and Water Consulting, P.O. Box 8254, Missoula, MT 59807

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for a Future Fisheries Project tentatively planned to stabilize a side channel on lower Rattlesnake Creek. This proposed project is located in Greenough Park, a park owned and maintained by the city of Missoula.

Please submit any comments that you have by 5:00 P.M., April 9, 2001 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
e-mail: mlere@state.mt.us

Missoula

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Rattlesnake Creek Channel Stabilization Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 that directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal.

This project is being proposed to stabilize a side channel of lower Rattlesnake Creek. Due to favorable substrate and water velocities, this side channel provides important spawning and rearing habitat for migrant rainbow trout and brown trout from the Clark Fork River. Most of the remainder of lower Rattlesnake Creek lacks suitable habitat for spawning due to steep gradients, high water velocities and a cobble-boulder substrate. Stabilization efforts call for the installation of a vortex rock w-weir at the head of the side channel, installation of a vortex rock weir at the head of an over-flow channel, and the relocation of about 250 feet of the side channel located near the confluence with the main channel. The project site is located in Greenough Park, a park owned and maintained by the city of Missoula (Attachment 1).

I. Location of Project: This project will be conducted on lower Rattlesnake Creek located in the city of Missoula's Greenough Park within Township 13 North, Range 19 West, Section 22 in Missoula County.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year plan of operation for the fisheries program is to "restore and enhance degraded habitat" by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help achieve this goal.

Spawning habitat is very limited on lower Rattlesnake Creek due to steep gradients, high water velocities and the lack of suitable substrate. A dam, located approximately three miles upstream from the confluence with the Clark Fork River, compounds the problem because it creates a complete barrier to fish migration. As a result, the side channel addressed in this proposed project serves as one of the few areas in lower Rattlesnake Creek for trout spawning habitat. The side channel has been found to provide important spawning habitat for rainbow trout and brown trout. For the most part, this side channel was re-formed during a 1997 flood event. This relatively new channel is unstable and is experiencing accelerated lateral erosion and head cutting on its lower reaches. The present instability displayed by this side channel could lead to the capture of the main channel of Rattlesnake Creek. This proposed project would act to stabilize this side channel in an effort to maintain important spawning habitat for migrant trout from the Clark Fork River.

III. Scope of the Project:

The intent of the project is to stabilize a side channel located on lower Rattlesnake Creek that presently provides important spawning habitat for trout. Total length of this side channel is approximately 2,500 feet. The project calls for the installation of a vortex rock w-weir in the main channel near the head of the side channel; the installation of a vortex rock weir at the head of an over-flow channel; the relocation of

about 250 feet of the side channel located near the confluence with the main channel; and the installation of two rock grade controls near the mouth of the side channel (Attachment 2). The low profile w-weir would be installed to maintain channel grade, thereby maintaining the current apportionment of flow between the main channel and the side channel. Installation of a vortex rock weir on the overflow channel would act to insure that the side channel does not capture this overflow channel. The channel relocation would involve the re-construction of an unstable and over-widened reach to a proper dimension, pattern and profile, followed by extensive re-vegetation with native plants. Finally, the installation of two rock grade controls near the mouth of the side channel would help prevent further head cutting from occurring. This project is expected to cost $59,500.00. Of this total, the Future Fisheries Improvement Program would be contributing up to $21,500.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Currently, the side channel addressed in this project provides important spawning and recruitment habitat for trout residing in the Clark Fork River. Stabilizing this side channel would help maintain important spawning habitat for trout migrating into lower Rattlesnake Creek, providing important recruitment of juvenile fish to the Clark Fork River.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 124 permit (Stream Protection Act) will be obtained from Montana Fish, Wildlife and Parks and the U.S. Army Corp of Engineers will be contacted for requirements needed to meet the federal Clean Water Act (404 permit).

3. Geology and soil quality, stability and moisture.

Soils along the stream margin would be disturbed during the installation of weirs and channel construction, but would quickly stabilize following proposed re-vegetation efforts. Overall, the project is expected to reduce the threat of significant channel instability by helping to prevent the side channel from capturing the main channel of Rattlesnake Creek.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover would be disturbed during the period of construction. However, proposed re-vegetation efforts would act to mitigate these disturbances.

5. Aesthetics.

Aesthetics would be enhanced by the re-vegetation efforts proposed within the riparian corridor. In contrast, installation of the proposed rock weirs may create an unnatural appearance. However, the placement of these structures would be in a low profile manner and would act to minimize visual impacts.

7. Unique, endangered, fragile, or limited environmental resources.

Westslope cutthroat trout and bull trout, although rare, are known inhabitants of lower Rattlesnake Creek. Because Rattlesnake Creek supports bull trout, the project will be included in Montana Fish, Wildlife and Parks Section 6 conservation plan with the U.S. Fish and Wildlife Service. The intent of the project is to stabilize a side channel that provides significant spawning habitat for trout. As a result, this project is expected to maintain spawning and rearing habitat for these two native species of fish.

9. Historic and archaeological sites

The proposed project likely will require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office has been contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

Stabilization of this side channel will maintain and protect important spawning habitat for migrant trout. As such, the project is expected to help provide continued recruitment of juvenile trout to the Clark Fork River.

13. Locally adopted environmental plans and goals.

A comprehensive plan for the Greenough Park Flood Management and Stream Restoration Project has been developed by a steering committee comprised of representatives from Montana Fish, Wildlife and Parks, Missoula County, city of Missoula and concerned citizens. This proposed project is directed at achieving a portion of the objectives as outlined in this comprehensive plan.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this side channel of lower Rattlesnake Creek will remain unstable and the threat of capturing the main channel will continue to be present. The aquatic habitat in this side

channel is somewhat unique for lower Rattlesnake Creek because of the flatter gradients, slower water velocities and the smaller gravel substrate found there. If left untreated, this unique habitat may become lost, resulting in the loss of important spawning habitat for migratory trout.

2. The Proposed Alternative

The proposed alternative is designed to stabilize a side channel on lower Rattlesnake Creek that provides important spawning habitat for migrant trout. Maintaining this important spawning habitat will provide for the continued recruitment of juvenile trout to the Clark Fork River.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA also will be published on Montana Fish, Wildlife and Parks web page: fwp.state.mt.us.

3. Duration of comment period?

Public comment will be accepted through 5 PM on April 9, 2001.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue, Helena, MT 59620
Telephone: (406) 444-2432
e-mail: mlere@state.mt.us

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Rattlesnake Creek Channel Stabilization Project

Division/Bureau Fisheries Division-Future Fisheries Improvement
Description of Project The project is being proposed to stabilize a side channel of lower Rattlesnake Creek. This side channel provides important spawning and rearing habitat for migrant rainbow trout and brown trout from the Clark Fork River. The project site is located within Greenough Park, a park owned and maintained by the city of Missoula.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals			X			X
14. Transportation networks & traffic flows				X		

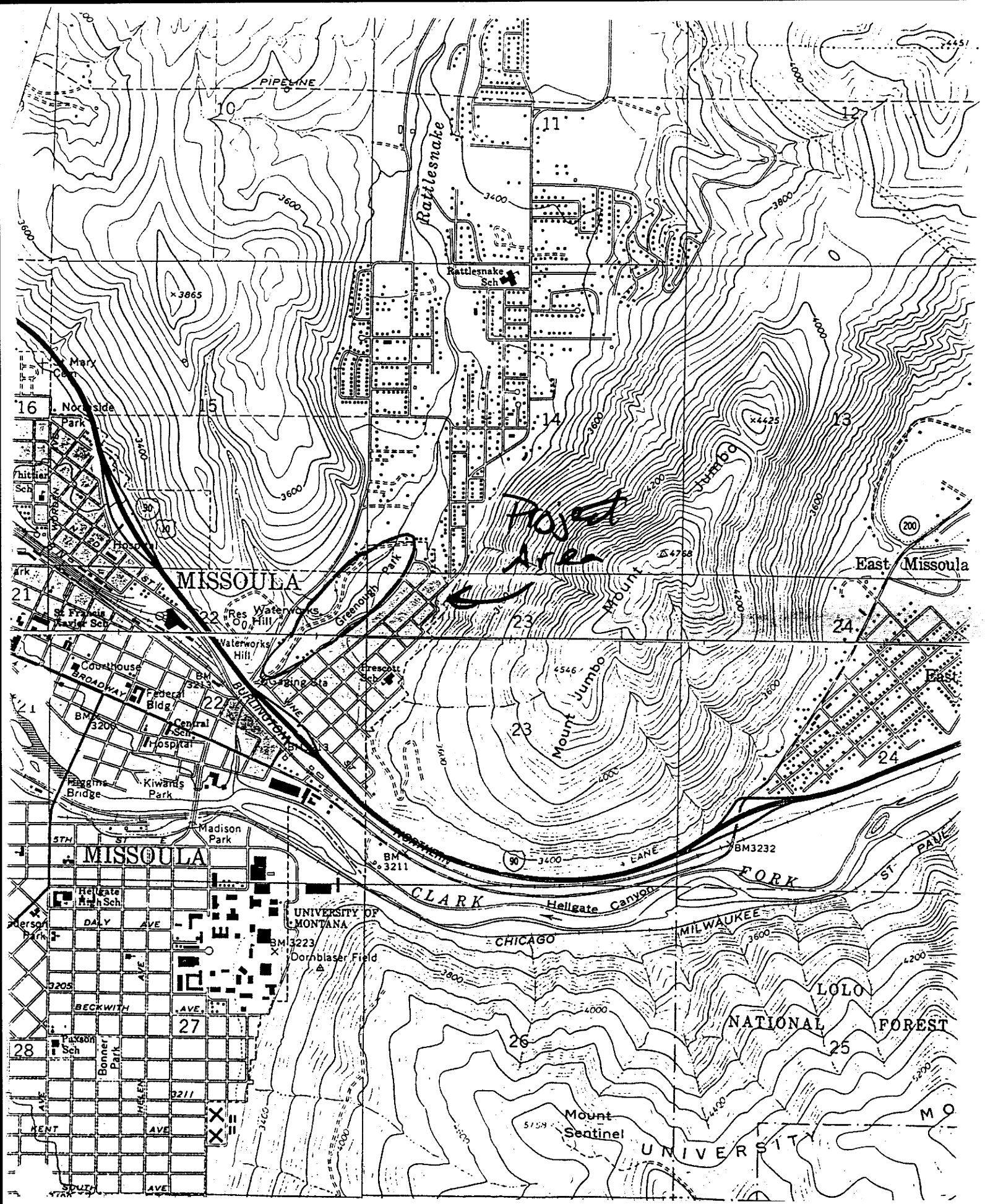
Other groups or agencies contacted or which may have overlapping jurisdiction City of Missoula, Missoula County Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA Ladd Knotek, Montana Fish, Wildlife and Parks; Land and Water Consulting, Inc.; Dan Rogers, Missoula Parks and Rec. Department

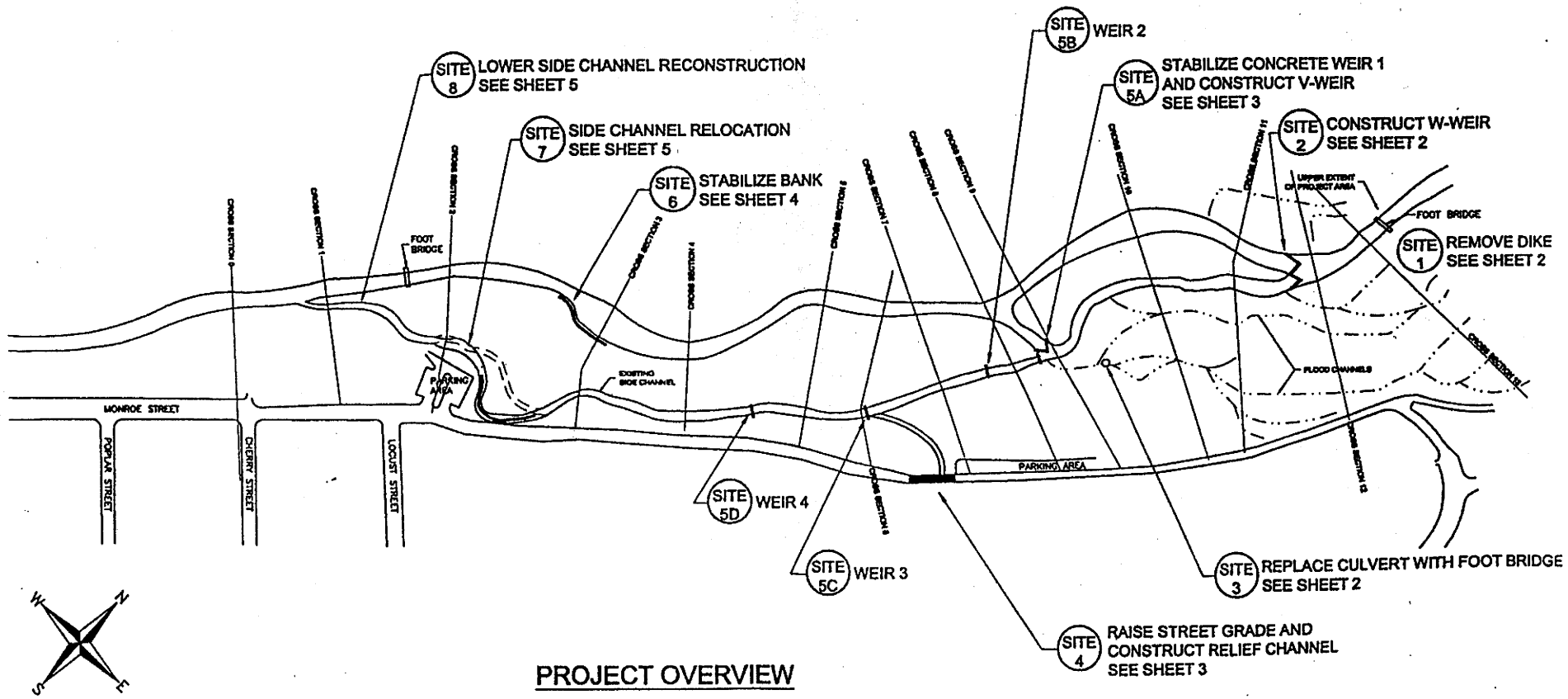
Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: February 22, 2001



Attachment 1. Map showing location of project site on Rattlesnake Creek.



PROJECT OVERVIEW

PROJECT NAME: GREENOUGH PARK RESTORATION
DRAWING TITLE: PLANVIEW
PROJ NO: 100266
FILE NAME: 100266 final 4.dwg
SCALE: NOTED
DRAWN: SPM
CHECKED: P.C.
APPVD: P.C.
LAND & WATER CONSULTING, INC.
SHEET NUMB: 1
REV -
DATE: 4/27/0

Attachment 2. Planer view of proposed project on Rattlesnake Creek.